What is claimed is:

1.   A computer architecture for global computer network-based monitoring of resource usage for at least one energy provider providing energy to a plurality of

5   resource users, comprising:

at least one resource-metering data recorder, in operation, recording, one of periodically and aperiodically, resource usage data measured by a plurality of resource meters, operatively connected to

10   a plurality of remotely located resource consuming devices;

a recorder translator, in operation, one of periodically and aperiodically, calling said data recorder, and one of periodically and aperiodically,

15   transferring one of directly and indirectly resource usage data from said data recorder to a database; and

at least one global computer network server, in operation, receiving a resource usage data query from a user via a global computer network, retrieving the

20   resource usage data of at least two resource users responsive to the resource usage data query entered by the user, aggregating the resource usage data for the at least two resource users, and transmitting resource management information based on the aggregated resource

25   usage data collected from the plurality of resource

meters to the user via a global computer network site responsively connected to said global computer network and said at least one global computer network server for analysis by the user of the aggregated resource

5   usage data collected by the at least two resource users provided by the at least one energy provider, said at least one global computer network server including billing software having at least one of a billing estimation and a billing engine for providing the user

10   with billing estimates based on existing billing structures.

2.   The computer architecture according to claim 1, wherein said data recorder includes a modem connectable

15   to one of a public switched telephone network and a wireless communications network and is in operative communication with said at least one server, using one of direct dial-up and Internet Protocol.

20   3.   The computer architecture according to claim 1, wherein said at least one server, in operation, presents said resource management information one of to a computer network of the user, to the user via the global computer network, and in a downloadable data

25   file.

4. The computer architecture according to claim 3, wherein said server includes at least one of resource management software having at least one of load

5 profiles and load tables, financial management software having at least one of real-time pricing, energy cost calculation, and cost allocation, and rate analysis software having rate comparison with variable rate structures and pricing options.

10

5. The computer architecture according to claim 1, wherein said data recorder, in operation, records at least one of a meter identification, data stamp, time stamp, kilowatts, kilowatt-hours, MCF of gas, gph,

15 temperature, pressure, volts, amperes, power quality, water low indication, pounds of steam, and measurement units of electricity, natural gas, gasoline, cable television, band width, telecommunications, short distance service, long distance service, water,

20 Internet usage, radio usage, cellular device usage, digital usage, and satellite usage.

6. The computer architecture according to claim 1, further comprising:

25   a resource-metering data recorder/translator unit

including a global computer network node and, in operation, recording one of periodically and aperiodically resource usage measured by an associated resource meter,

5   wherein said at least one server, in operation, stores the resource usage data recorded by said data recorder/translator unit in said database.

7.   The computer architecture according to claim 1,
10   wherein said at least one global computer network server includes a World Wide Web server and said global computer network site includes a World Wide Web site.

8.   A method of monitoring resource usage, via a
15   global computer network, for at least one energy provider providing energy to a plurality of resource users, the method comprising the steps of:

(a) recording, one of periodically and aperiodically, resource usage measured by at least one
20   resource meter, operatively connected to at least one remotely located resource consuming device, using a resource metering data recorder;

(b) polling, one of periodically and aperiodically, the data recorder for the resource usage data;

25   (c) storing, one of periodically and aperiodically,

the resource usage data in a database;

(d) repeating said recording step (a), said polling step (b), and said storing step (c);

(e) determining, simultaneously to said repeating step (d), whether a query from a user is received at a global computer network server;

(f) retrieving, when a query is received, resource usage data relevant to the user and at least two resource users from the database;

(g) aggregating the resource usage data for the at least two resource users; and

(h) transmitting resource management information based on the aggregated resource usage data to the user one of at a global computer network interface site and in a downloadable data file, the global computer network interface site and the downloadable file being responsively connected to the global computer network server for analysis by the user of the aggregated resource usage data collected by the at least two resource users provided by the at least one energy provider; and

(i) transmitting billing estimates to the user based on existing billing structures.

9. The method according to claim 8, further

comprising the step of repeating said determining step (e), said retrieving step (f), said aggregating step (g), and said transmitting step (h).

5   10.   The method according to claim 8, wherein said recording step (a) includes recording at least one of a meter identification, data stamp, time stamp, kilowatts, kilowatt-hours, MCF of gas, gph, temperature, pressure, volts, amperes, power quality,

10   water low indication, pounds of steam, and measurement units of electricity, natural gas, gasoline, cable television, band width, telecommunications, short distance service, long distance service, water, Internet usage, radio usage, cellular device usage,

15   digital usage, and satellite usage.

      11.   The method according to claim 8, wherein said server includes at least one of resource management software having at least one of load profiles and load

20   tables, financial management software having at least one of real-time pricing, energy cost calculation, and cost allocation, rate analysis software having rate comparison with variable rate structures and pricing options, and billing software having at least one of

25   billing estimation and a billing engine.

12. A computer architecture for global computer network-based monitoring of resource usage for at least one energy provider providing energy to a plurality of

5   resource users, comprising:

at least one resource-metering data recorder/translator unit including a global computer network node and, in operation, recording, one of periodically and aperiodically, resource usage data

10   measured by a plurality of resource meters operationally connected to a plurality of remotely located resource consuming devices; and

at least one global computer network server, in operation, storing the resource usage data recorded by

15   said data recorder/translator unit, receiving a resource usage data query from a user via a global computer network, retrieving the resource usage data for at least two resource users responsive to the resource usage data query entered by the user,

20   aggregating the resource usage data for the at least two resource users and transmitting resource management information based on the aggregated resource usage data to the user via a global computer network site responsively connected to said global computer network

25   and said at least one global network server for

analysis by the user of the aggregated resource usage

data collected by the at least two resource users

provided by the at least one energy provider, said at

least one global computer network server including

5   billing software having at least one of a billing

estimation and a billing engine for providing the user

with billing estimates based on existing billing

structures.

10   13.   The computer architecture according to claim

12, wherein said data recorder/translator unit includes

a modem connectable to one of a public switched

telephone network and a wireless communications

network, and, in operation, communicates with said at

15   least one server using one of direct dial-up, Internet

Protocol, and a publish/subscribe network communication

protocol.

          14.   The computer architecture according to claim

20   12, wherein said data recorder/translator unit includes

a World Wide Web site, which in operation displays at

least one of the resource usage data recorded by said

data recorder/translator unit and the energy management

information.

25

15. The computer architecture according to claim 12, wherein said at least one server, in operation, presents said resource management information one of to a network of the user, to the user via the global

5 computer network, and in a downloadable data file.

16. The computer architecture according to claim 12, wherein said server includes at least one of resource management software having at least one of

10 load profiles and load tables, financial management software having at least one of real-time pricing, energy cost calculation, and cost allocation, and rate analysis software having rate comparison with variable rate structures and pricing options.

15

17. The computer architecture according to claim 12, wherein said data recorder/translator unit, in operation, records at least one of a meter identification, data stamp, time stamp, kilowatts,

20 kilowatt-hours, MCF of gas, gph, temperature, pressure, volts, amperes, power quality, water low indication, pounds of steam, and measurement units of electricity, natural gas, gasoline, cable television, band width, telecommunications, short distance service, long

25 distance service, water, Internet usage, radio usage,

cellular device usage, digital usage, and satellite
usage.

18. The computer architecture according to claim
12, further comprising:
    a resource-metering data recorder, in operation,
recording, one of periodically and aperiodically,
resource usage data measured by an associated resource
meter; and
    a recorder translator, in operation, calling, one
of periodically and aperiodically, said data recorder,
and transferring, one of periodically and
aperiodically, the resource usage data from said data
recorder to said database.

19. The computer architecture according to claim
12, wherein said at least one global computer network
server includes a World Wide Web server and said global
computer network site includes a World Wide Web site.

20. A method of monitoring resource usage, via a
global computer network, for at least one energy
provider providing energy to a plurality of resource
users, the method comprising the steps of:
    (a) recording, one of periodically and

aperiodically, resource usage data measured by at least

one resource meter, operatively connected to at least

one remotely located resource consuming device, using a

resource usage data recorder/translator unit;

5   (b) publishing, one of periodically and

aperiodically, the recorded resource usage data on a

global computer network via a publish/subscribe network

communication protocol, using the data

recorder/translator unit;

10   (c) subscribing, one of periodically and

aperiodically, to the published resource usage data,

using at least one global computer network server;

        (d) storing, one of periodically and aperiodically,

the subscribed resource usage data to a database;

15   (e) repeating said recording step (a), said

publishing step (b), said subscribing step (c), and

said storing step (d);

        (f) determining, simultaneous to said repeating

step (e), whether a query from a user is received at

20   the at least one server;

        (g) retrieving, when a query is received, resource

usage data relevant to at least two resource users from

the database;

        (h) aggregating the resource usage data for the at

25   least two users; and

(i) transmitting resource management information
based on the aggregated resource usage data to the user
one of at a global computer network site and in a
downloadable data file for analysis by the user of the
5   aggregated resource usage data collected by the at
least two resource users provided by the at least one
energy provider, the global computer network site and
the downloadable data file being responsively connected
to the global computer network server; and

10   (j) transmitting billing estimates to the user
based on existing billing structures.

21. The method according to claim 20, further
comprising the step of repeating said determining step
15 (f), said retrieving step (g), said aggregating step
(h), and said transmitting step (i).

22. The method according to claim 20, wherein said
recording step (a) includes recording at least one of a
20 meter identification, data stamp, time stamp,
kilowatts, kilowatt-hours, MCF of gas, gph,
temperature, pressure, volts, amperes, power quality,
water low indication, pounds of steam, and measurement
units of electricity, natural gas, gasoline, cable
25 television, band width, telecommunications, short

distance service, long distance service, water,

Internet usage, radio usage, cellular device usage,

digital usage, and satellite usage.

5   23. The method according to claim 20, wherein said

server includes at least one of resource management

software having at least one of load profiles and load

tables, financial management software having at least

one of real-time pricing, energy cost calculation, and

10   cost allocation, rate analysis software having rate

comparison with variable rate structures and pricing

options, and billing software having at least one of

billing estimation and a billing engine.

15   24. A computer architecture for computer network-

based monitoring of resource usage, comprising:

at least one resource-metering data

recorder/translator unit including a computer network

node and, in operation, recording, one of periodically

20   and aperiodically, resource usage data collected by a

plurality of resource meters operationally connectable

to a plurality of remotely located resource consuming

devices, respectively; and

at least one computer network server, in operation,

25   storing the resource usage data recorded by said at

least one resource-metering data recorder/translator

unit, receiving a resource usage data query from a user

via a computer network, retrieving the resource usage

data responsive to the resource usage data query

5   entered by the user, and aggregating resource

management information based on the resource usage data

collected from the plurality of resource meters,

transmitting the aggregated resource usage data to the

user via a computer network site responsively connected

10   to said at least one computer network server and said

computer network, and transmitting billing estimates to

the user based on existing billing structures.

25.   A computer implemented process of computer

15   network-based monitoring of resource usage assisting a

user in the purchase of resources, comprising the steps

of:

(a)   recording, one of periodically and

aperiodically, resource usage data measured by a

20   plurality of resource meters operationally connectable

to a plurality of remotely located resource consuming

devices, respectively;

(b)   receiving a resource usage data query from a

user via a computer network, and correlating the

25   resource usage data responsive to the resource usage

data query;

(c)   aggregating the correlated resource usage data;

(d)   transmitting the aggregated resource usage
5   data to the user via a computer network site responsively connected to said at least one computer network server and said computer network; and

(e)   evaluating, by the user, the aggregated resource usage data; and

10   (f)   purchasing the resources responsive to the aggregated resource usage data for said plurality of remotely located resource consuming devices.

26.   In a computer architecture for global
15   computer network-based monitoring of resource usage including at least one resource-metering data recorder/translator recording resource usage data collected by resource meters connected to remote located consuming device, a method comprising the steps
20   of:

(a)   monitoring energy use of a specific resource over the global computer network;

(b)   evaluating the energy use of a specific resource responsive to said monitoring step; and

25   (c)   determining whether maintenance is required for the specific resource responsive to the energy use

of the specific resource.

27. A computer system including software
architecture reporting resource usage implemented by
5   the computer system, comprising:

financial management software implementing at
least one of real-time pricing, energy cost calculation
and cost allocation;

resource management software means for
10   implementing at least one of load profiles and load
tables;

rate analysis software means for implementing rate
comparison with variable rate structures and pricing
options, and;
15   billing software means for implementing at least
one of billing estimation and a billing engine.

28. The computer system according to claim 27,
wherein said computer system further comprising the
20   ability to implement at least one of:

tracking different markets needs, aggregating
energy information, combining gas, electric and power
information, nominating maximum daily quantities,
accessing and displaying any measurable data, signaling
25   abnormal energy consumption, forecasting energy use,
identifying of complementary loads and analyzing.

29. The computer system according to claim 27, wherein said computer system further implementing the function of:

5   creating load and cost curves for energy use; creating maximum daily quality plots of energy and gas; power quality analysis of outages, voltage dips and sags, power factor, phase information for power, amps, and volts, and/or harmonics; billing information which

10   creates billing comparisons, bill estimation, bill simulation and includes a billing engine (for example, billing and/or payment over the Internet); and weather data, which is optionally specific to at least one of a customer's locale, real-time energy prices and

15   utility cost management.

30. The computer system according to claim 27, wherein said computer system further implementing the function of:

20   weather data, which is specific to at least one of a customer's locale, real-time energy prices and utility cost management.

31. A computer architecture for a service provider

25   network for monitoring resource usage of a plurality of remotely located resource consuming devices comprising:

a plurality of resource meters, operatively
connected to a plurality of remotely located resource
consuming devices and to an internal computer network
via at least one of recorder translator, network

5   server, dialer and applications server, said plurality
of resource meters connectable to at least one of a
public switched telephone network and a wireless
communications network and in operative communication
with at least one server;

10   an area computer network connected to said internal
computer network, said internal computer network
connected to at least one of database server,
application server, web server, ftp site server;

a first firewall is connected to at least one of

15   said web server and said ftp site server;

at least one of first service provider network
computer, in operation, receiving a resource usage data
query from a user via a global network, retrieving the
resource usage data responsive to the resource usage

20   data query entered by the user, and transmitting
resource management information based on the resource
usage data collected from the plurality of resource
meters to the user via the global network via first
firewall;

25   a modem is used by the user to connect to the
global network and to the resource meter directly;

a second firewall is connected to at least one of

said database server, said application server, said web

server, said ftp site server and said resource usage

data query is transmitted through the second firewall;

5   at least one second service provider network server

includes a World Wide Web server, said service provider

network site includes a World Wide Web site;

a backup server is connected to said internal

computer network and to a backup storage facility.

10

32. An arrangement for globally monitoring

resource usage for at least one energy provider

providing energy to a plurality of resource users,

comprising:

15   a plurality of resource meters operatively coupled

to remotely located resource consuming devices, said

plurality of resource meters measuring resource usage

data from said resource consuming devices;

at least one resource-metering data recorder for

20 recording the measured resource usage data; and

at least one global computer network server

configured to:

receive the resource usage data from said at

least one resource-metering data recorder and store the

25 resource usage data in a database system,

receive a resource usage data query from a

user via a global computer network,

retrieve resource usage data for at least two resource users responsive to the resource usage data query,

5   aggregate the resource usage data retrieved for the at least two resource users, and

transmit resource management information based on the aggregated resource usage data to the user via said global computer network, and transmit billing

10   estimates for the user based on existing billing structures.

33. The arrangement of claim 32, wherein said global computer network server is further configured to

15   optimize the aggregated resource usage data.

34. The arrangement of claim 33, wherein the global computer network server optimizes the aggregated resource usage data by removing the resource usage data

20   of one or more of the at least one additional users.

35. The arrangement of claim 33, wherein the global computer network server optimizes the aggregated resource usage data by retrieving resource usage data

25   from different resource users.

36.   The arrangement of claim 33, wherein the global computer network server optimizes the aggregated resource usage data by removing the resource usage data of one or more of the resource users, and retrieving

5   resource usage data from different resource users.

37.   The arrangement of claim 33, wherein the optimized aggregate resource usage data represents a substantially constant rate of average resource

10   consumption for the resource users and the at least one additional user by said plurality of resource consuming devices.

38.   A method of globally monitoring resource

15   usage for at least one energy provider providing energy to a plurality of resource users, the method comprising the steps of:

measuring resource usage data from a plurality of resource consuming devices;

20   recording the measured resource usage data;

transmitting the recorded resource usage data to a global computer network server;

storing the resource usage data in a database system;

25   receiving, by the global computer network server, a resource usage data query from a user via a global

computer network;

retrieving, by the global computer network server, resource usage data for at least two resource users responsive to the resource usage data query;

5   aggregating the resource usage data retrieved for the at least two resource users; and

transmitting resource management information and billing estimates based on the aggregated resource usage data to the user via the global computer network.

10

39. The method claim 38, further comprising a step of optimizing the aggregated resource usage data prior to performing the step of transmitting.

15   40. The method of claim 39, wherein the step of optimizing further includes the steps of:

removing the resource usage data of one or more of the at least two resource users; and

repeating the step of aggregating.

20

41. The method of claim 39, wherein the step of optimizing further includes the steps of:

retrieving resource usage data from different resource users; and

25   repeating the step of aggregating.

42. The arrangement of claim 39, wherein the step of optimizing further includes the steps of:

removing the resource usage data of one or more of the additional users;

5   retrieving resource usage data from different users; and

repeating the step of aggregating.

43. A system for globally monitoring resource
10 usage for at least one energy provider providing energy to a plurality of resource users, comprising:

a plurality of resource meters operatively coupled to remotely located resource consuming devices, said plurality of resource meters measuring resource usage
15 data from said resource consuming devices;

at least one resource-metering data recorder for recording the measured resource usage data; and

at least one global computer network server configured to:
20   receive the resource usage data from said at least one resource-metering data recorder and store the resource usage data in a database system,

receive a resource usage data query from a user via a global computer network,   .
25   retrieve resource usage data for at least two resource users responsive to the resource usage data

query,

aggregate the resource usage data retrieved for the at least two resource users,

transmit resource management information

5   based on the aggregated resource usage data to the user via said global computer network, and

transmit billing estimates for the user based on existing billing structures;

wherein the resource management information

10 includes a chart displaying information relating to kilovolt ampere reactance (kVAr), power factor, real-time pricing cost, and contract rate cost.

44. A system for globally monitoring resource

15 usage for at least one energy provider providing energy to a plurality of resource users, comprising:

a plurality of resource meters operatively coupled to remotely located resource consuming devices, said plurality of resource meters measuring resource usage

20 data from said resource consuming devices;

at least one resource-metering data recorder for recording the measured resource usage data; and

at least one global computer network server configured to:

25   receive the resource usage data from said at least one resource-metering data recorder and store the

resource usage data in a database system,

receive a resource usage data query from a user via a global computer network,

retrieve resource usage data for at least two

5   resource users responsive to the resource usage data query,

aggregate the resource usage data retrieved for the at least two resource users,

transmit resource management information

10   based on the aggregated resource usage data to the user via said global computer network, and

transmit billing estimates for the user based on existing billing structures;

wherein the resource management information

15   includes a chart displaying resource usage by each resource user and the aggregated resource usage.

45.   The computer architecture of claim 1, wherein said at least two resource users are remotely located

20   from each other.

46.   The computer architecture of claim 1, wherein said at least two resource users receive the resource from different energy providers.

25

47.   The computer architecture of claim 12,

wherein said at least two resource users are remotely located from each other.

48. The computer architecture of claim 12, wherein said at least two resource users receive the resource from different energy providers.

49. The arrangement of claim 32, wherein said at least two resource users are remotely located from each other.

50. The arrangement of claim 32, wherein said at least two resource users receive the resource from different energy providers.

51. The system of claim 43, wherein said at least two resource users are remotely located from each other.

52. The system of claim 43, wherein said at least two resource users receive energy from different energy providers.